

ABSTRACT OF THE DISCLOSURE

The present invention generally provides an apparatus and a method for inspecting a substrate in a processing system. In one embodiment, a substrate process inspection system comprises a plurality of optical inspection systems each configured to perform an optical inspection process at a first degree of optical resolution and an inspection platform configured to perform an optical inspection process at a second degree of optical resolution. The plurality of optical inspection systems each comprises a transmitter unit and a receiver unit. The substrate process inspection system further comprises a controller system connected to the plurality of optical inspection systems and the inspection platform. The controller system is configured to (i) process optical signal information indicative of a topographical condition on a substrate inspected by at least one of the plurality of optical inspection systems and (ii) in response to the topographical condition, cause execution of one of a plurality of subsequent substrate handling steps. In one embodiment, a first substrate handling step comprises transferring the substrate to the inspection platform for further optical inspection.